

The background of the slide features a deep blue underwater scene with two whales. A large, semi-transparent watermark of the Roman numeral 'IX' is positioned on the left side, spanning most of the vertical height. The text 'Science & Education Report' is centered horizontally and partially overlaps the 'IX' watermark.

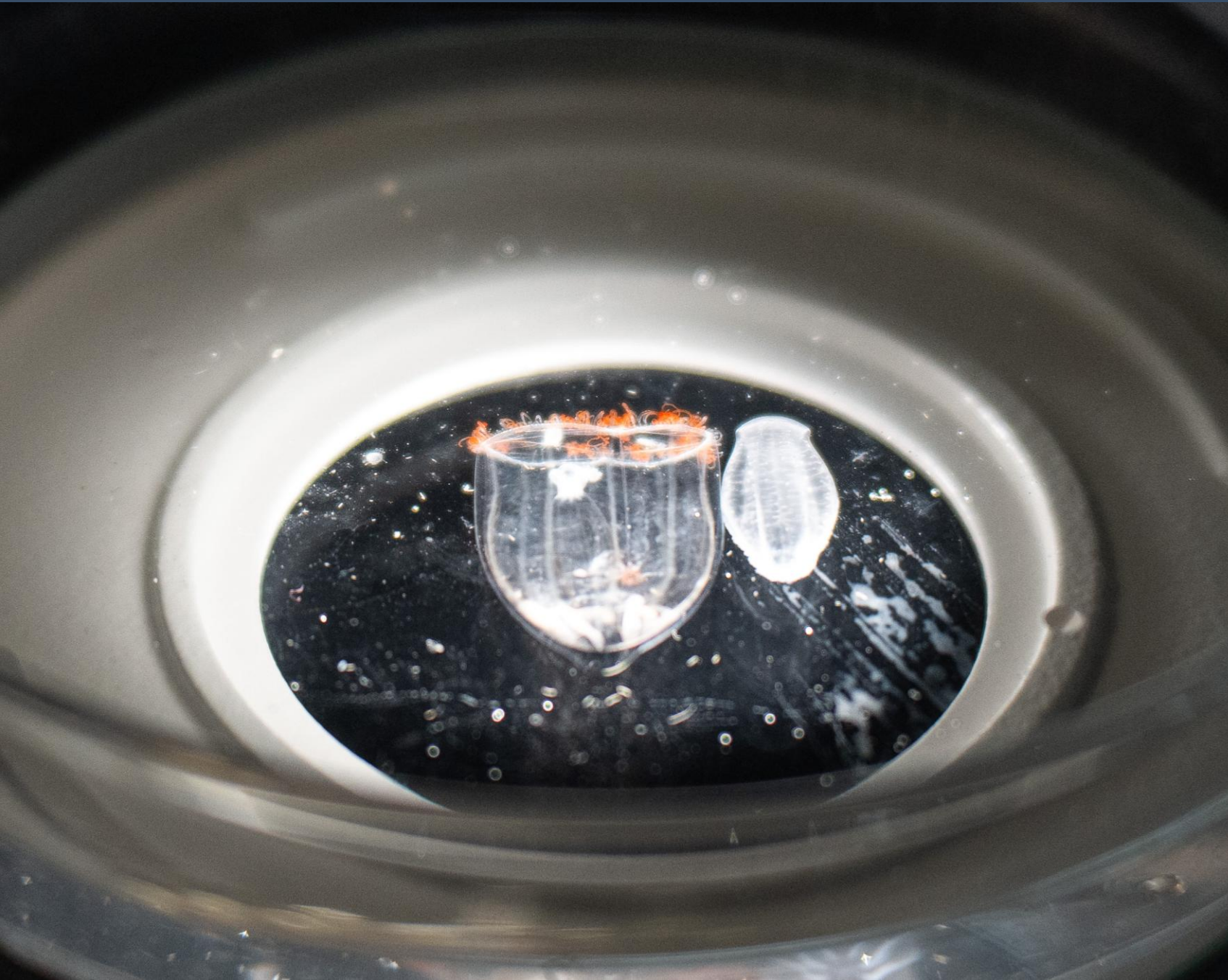
Science & Education Report

Grand Greenland — Mythical Lands of the North

MS Fridtjof Nansen

1 — 15 August 2026





Science & Education Programme

Guests explored Greenland through lectures, workshops, time on deck and experiences ashore, discovering more about its coastlines, fjords, wildlife, plants and weather along the way. By taking part in Citizen Science, guests also contributed their own observations to a wider understanding of the natural world.

These experiences offered opportunities to look more closely, ask questions and build a deeper connection with the places visited throughout the voyage.



Science & Education Programme

Guests became part of a wider scientific effort by observing, recording, and sharing data through Citizen Science. Their contributions supported ongoing research while offering new ways to engage with the natural world throughout the voyage. That involvement can continue beyond the journey, through observing, documenting, and contributing wherever they go.

History & Culture

Guests travelled from Nuuk to the far north and back again, experiencing a Greenland shaped by its nature, traditions, and people. Along the route, guests encountered towering mountains, deep fjords, vast stretches of ice, and settlements closely connected to the landscape. Houses climbed the mountainsides where the terrain allowed, while sledge dogs waited for winter and the return of the ice. Guests also had opportunities to experience everyday life more closely, including visits to local communities and homes that offered a glimpse into Greenlandic culture and traditions.



History & Culture

As guests travelled further north, they encountered different ways of life across Greenland. In northern communities, traditional hunting practices, including the use of qajaqs and harpoons, remain part of everyday life, while further south motorboats and rifles are more common. Across these differences, guests experienced a strong sense of welcome in the communities visited, offering a glimpse of both the diversity and the shared traditions that connect life across Greenland.



History & Culture

In Qeqertarsuaq, guests joined members of the local community for polka dancing, sharing a tradition that brings people together through music and movement. Later that evening, guests danced again onboard MS Fridtjof Nansen, this time to music from the crew band.

Different places, backgrounds, and languages came together through the same simple experience: sharing music, laughter, and a dance floor.



Geology

Much of Greenland's geology is dominated by ancient crystalline rocks, including gneiss, with parts of the bedrock dating back more than three billion years. Ice, glaciers, and erosion have since carved this ancient foundation into the mountains, fjords, and valleys seen along the route.

At Uummannaq, guests saw this geology on a dramatic scale. The town lies beneath the distinctive 1,175-metre heart-shaped Uummannaq Mountain, one of the defining features of the island and the surrounding fjord landscape.



Glaciology

Guests travelled through a landscape dominated by ice. The Greenland Ice Sheet covers almost 80% of the country and slowly flows from the interior towards the coast through glaciers and ice streams. Along the route, guests also encountered sea ice, glaciers, icebergs, and permafrost — different parts of Greenland's cryosphere, each shaped by seasonal change, temperature, and interaction with the ocean. Together, they revealed how strongly ice shapes Greenland's landscapes, ecosystems, and connection to the wider world.



Arts, Crafts & Creativity

Guests explored creativity through bottle painting, origami, mandalas and watercolours, finding another way to connect with the places visited during the voyage. With curiosity and a willingness to try something new, each creation became a personal reflection of the landscapes, wildlife and moments experienced along the way.





Wildlife Watch

As guests travelled around Greenland, time on deck offered opportunities to observe changing landscapes, weather and wildlife. Guests searched the sea and coastline for signs of life, from seabirds riding the wind to whales and other wildlife appearing around MS Fridtjof Nansen. Each sighting added to their understanding of the connections between land, sea and sky. These observations became an important part of the journey, extending the experience beyond the places visited ashore.



Science Boat

Across 15 science boat sessions, guests took part in hands-on exploration of the waters along our route. Using the plankton net, CTD and Secchi Disk, guests collected samples and measurements to investigate plankton, water conditions and clarity beneath the surface. Each session offered a closer look at how scientific observations and measurements help us understand the marine environment.

Secchi Disk

Guests used the Secchi Disk to measure water clarity, lowering it into the water until it disappeared from view. These measurements provided information about plankton abundance and water conditions. On some days, strong currents prevented measurements, showing how field conditions can shape scientific work. Each successful reading contributed another observation to the study of the marine environment.





CTD

Beneath the surface, the ocean holds important clues about change.

With the CTD, guests measured temperature, salinity, and depth, helping better understand water conditions along our route.

Each profile added useful data on how freshwater, currents, and ocean layers shape these waters, one measurement at a time.

Water Sampling

During our expedition, we collected water samples from Uummannaq, Savissivik, Dundas, and Siorapaluk.

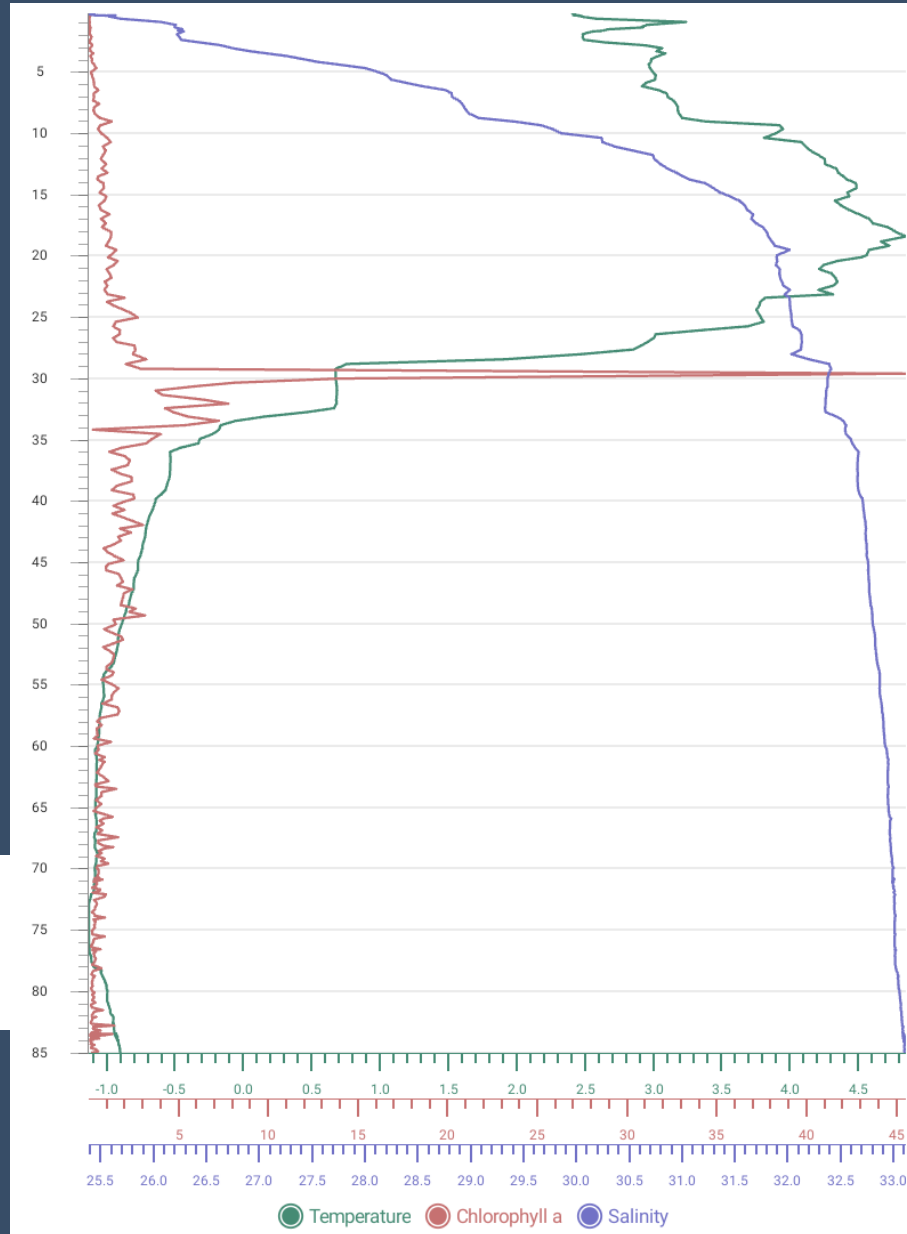
From the science boat, guests deployed plankton nets, towing them through the water to capture these drifting life forms. The phytoplankton net (20 μm mesh) collected microscopic plant-like organisms that form the base of the marine food web in these fjord and coastal systems.

Each tow offered a glimpse into the hidden world beneath the surface, helping us understand how these tiny organisms support life along the Greenlandic coast.



Depth Profile: Savissivik

Depth (m)



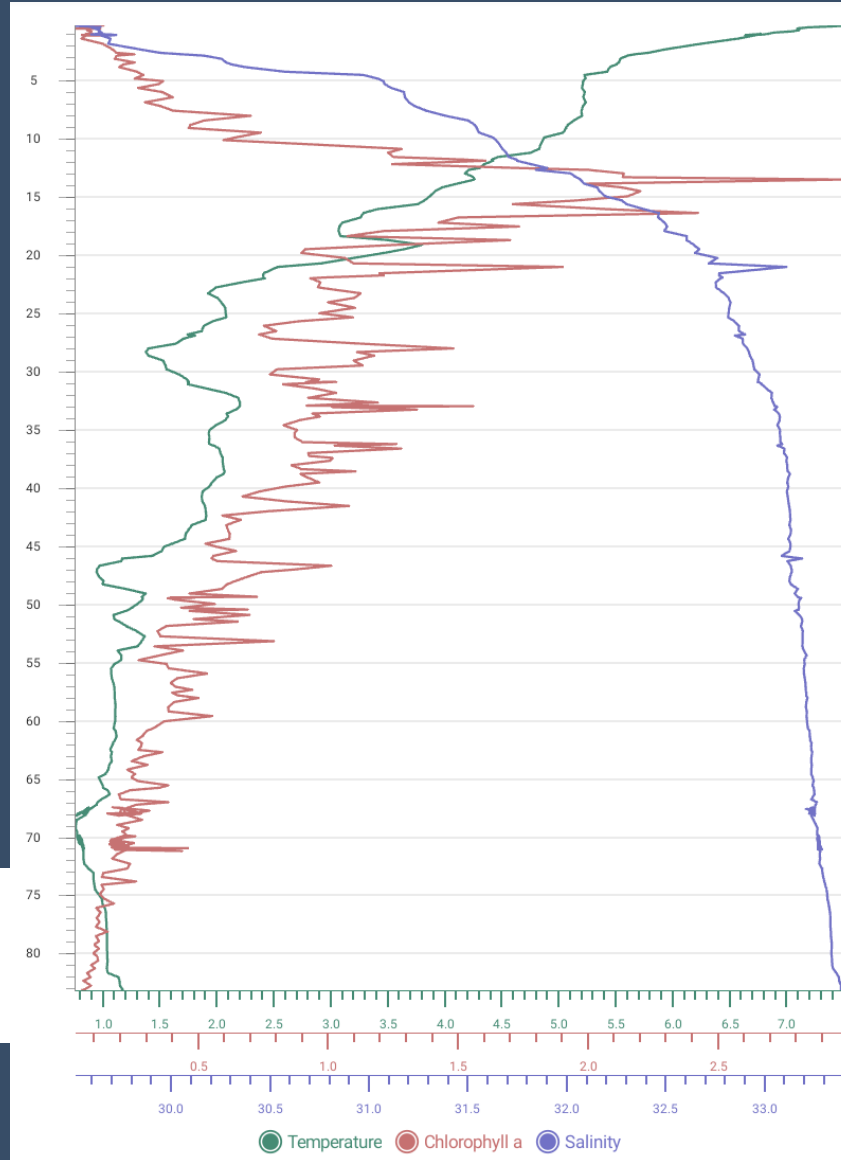
Temperature (°C)
Chlorophyll a (µg/l)
Salinity (PSU)

Our CTD profile from Savissivik shows a quite different profile. We can see a warmer water mass until 25 m with a temperature of around 4°C. This warm water is also much fresher than the underlying colder sea water, which is less than 0°C from 35 m to 85 m. This indicates a 25–30 m thick layer of warm meltwater. Salinity was lowest at the surface, with 25.6 PSU, reaching 33 PSU at 85 m depth. This indicates a freshwater layer at the surface, which is the result of meltwater from the surrounding icebergs. Considering that it was a warm and sunny day, this makes sense.

Phytoplankton, shown here as a measure of chlorophyll a (µg/l), showed a good peak at 30 m, right at the barrier between the fresher and the sea water. The fresh layer creates a barrier that phytoplankton cannot cross. Needing light from above, they accumulated at 30 m.

Depth Profile: Ummannaq

Depth (m)

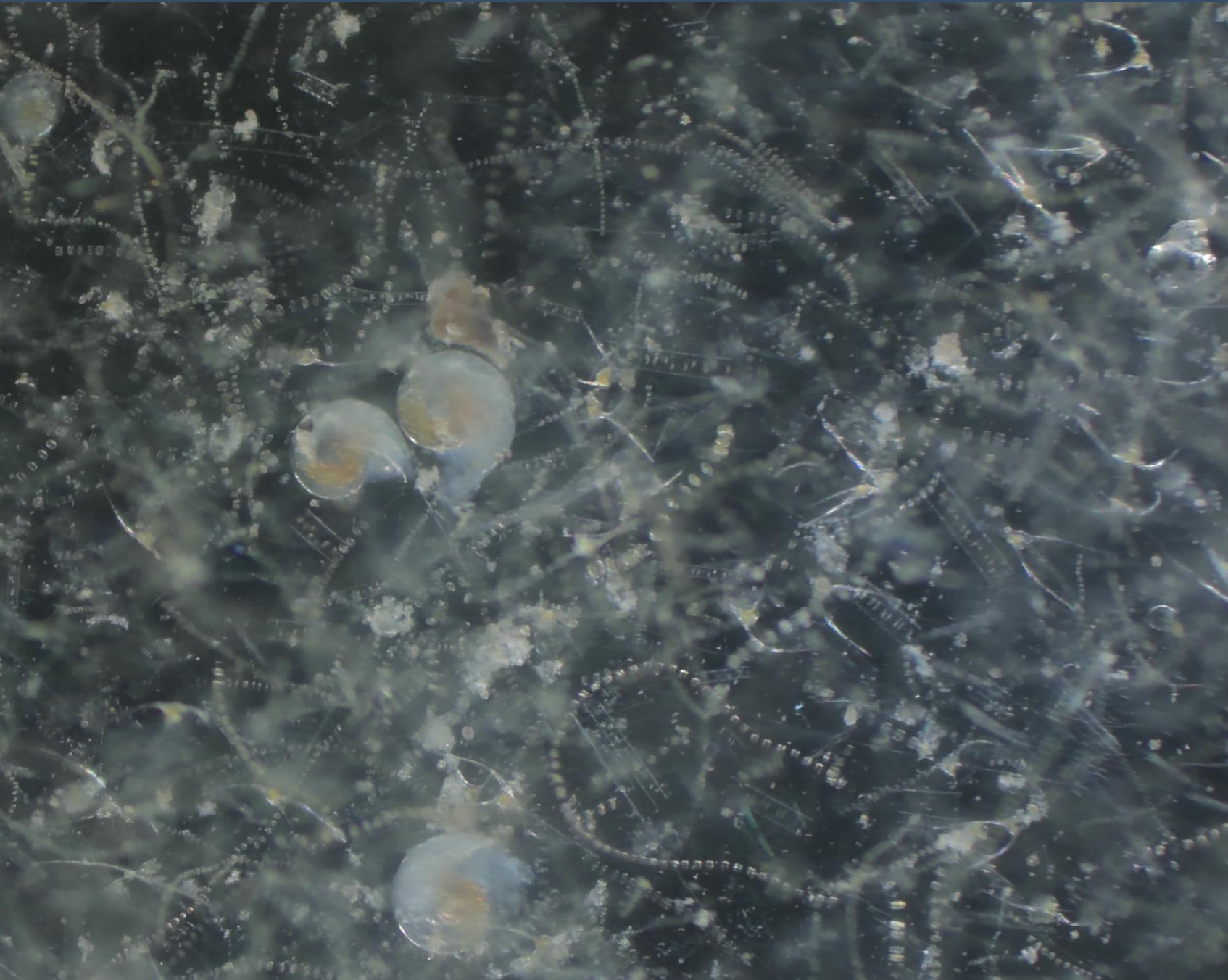


Temperature (°C)
Chlorophyll a (µg/l)
Salinity (PSU)

Our CTD profile from Uummanaq shows a 6°C difference in temperature between the surface and 83 m depth. The surface was significantly warmer than at depth. Considering that it was a warm and sunny day, this makes sense. It is these differences in temperature and also salinity that drive our ocean currents.

Phytoplankton, shown here as a measure of chlorophyll a (µg/l), showed a small peak at 14 m and was overall low. Our plankton sample showed a lot of zooplankton, which likely has been feeding on a recent phytoplankton bloom and reducing the chlorophyll a concentration.

Salinity was lowest at the surface, with 29.6 PSU, reaching 33.3 PSU at 83 m depth. This indicates a freshwater layer at the surface, which is the result of meltwater from the surrounding icebergs.



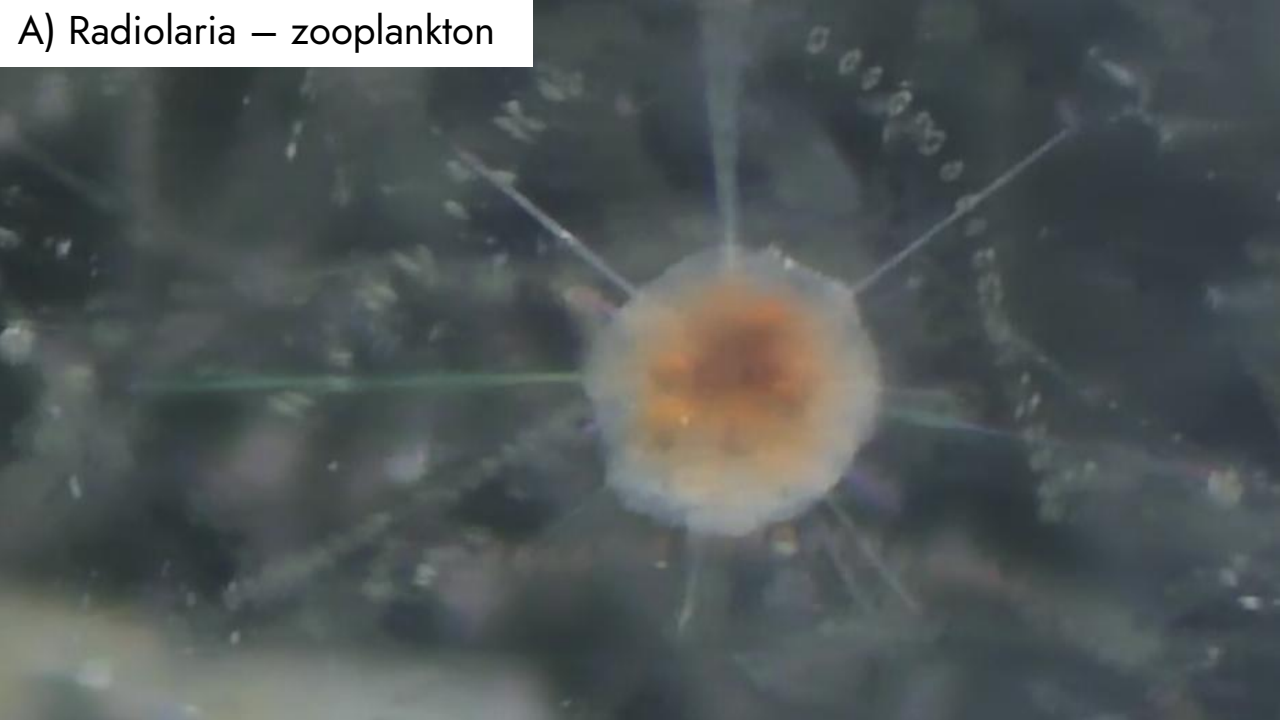
Plankton Samples

Back in the Science Centre, guests brought the surface tow samples into focus under the microscope, revealing a hidden world of plankton.

Using the main screen and smaller microscopes, you could explore each drop of water up close.

What appeared invisible to the naked eye quickly became a vivid reminder that these tiny organisms form the foundation of the rich ecosystems we have been travelling through.

A) Radiolaria — zooplankton



B) *Themisto* sp. — zooplankton



C) Bristleworm larvae — zooplankton



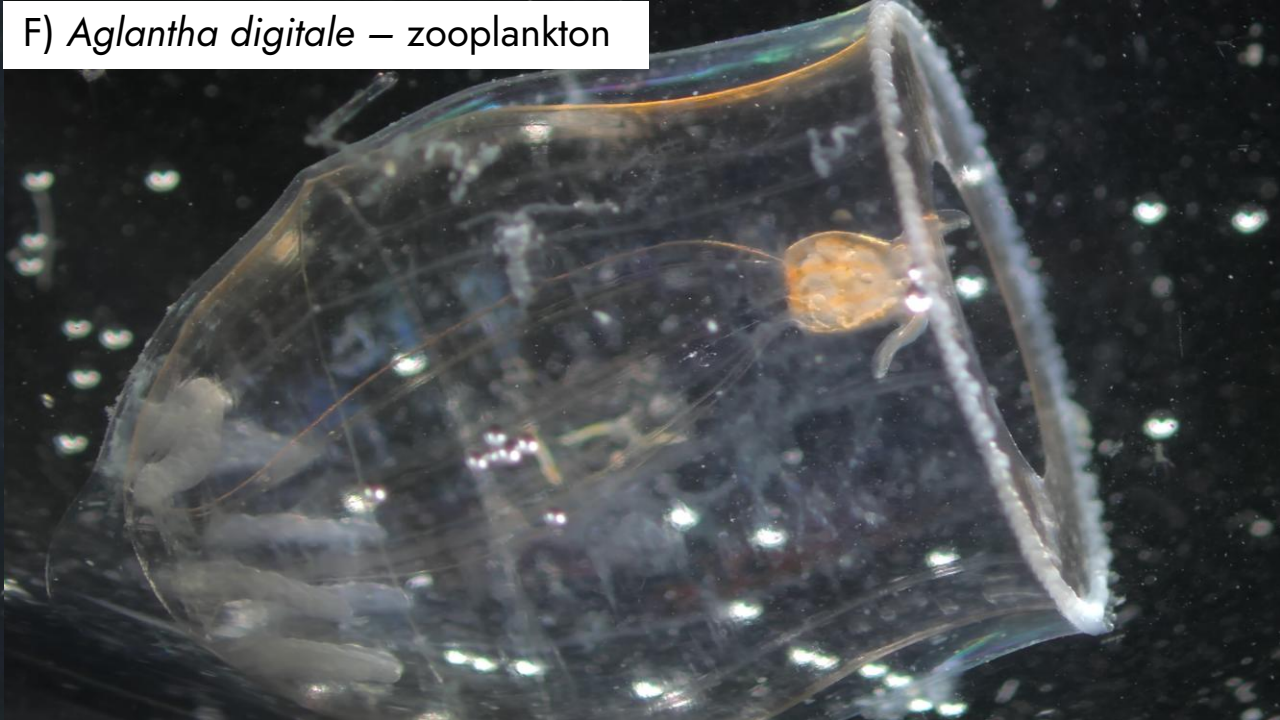
D) Northern comb jelly — zooplankton



E) Small medusa – zooplankton



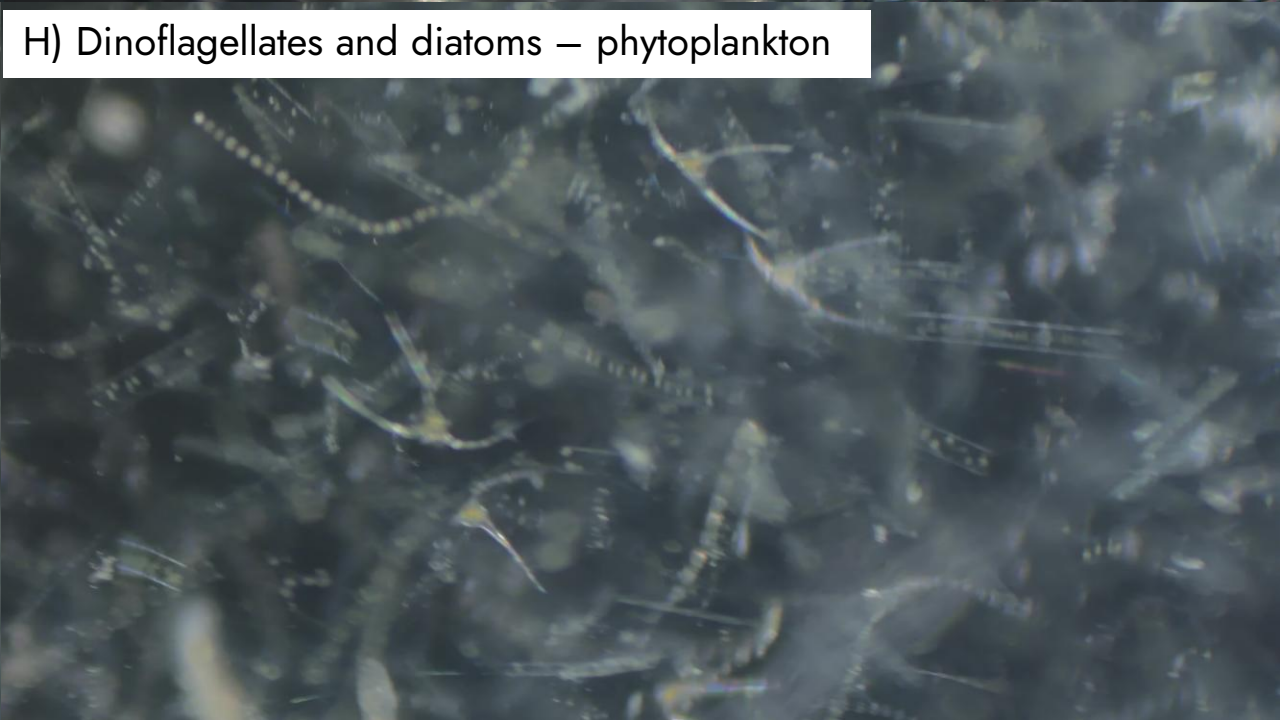
F) *Aglantha digitale* – zooplankton



G) Copepod sp. – zooplankton



H) Dinoflagellates and diatoms – phytoplankton



NASA Cloud Observer

During our voyage, guests contributed to NASA's GLOBE Cloud Observations, collecting data on:

- 4 August (Uummannaq)
- 8 August (Ice Edge)
- 11 August (At Sea)

By comparing our observations with satellite data, scientists can improve cloud classification, weather forecasting, and climate models.

Guests can continue contributing from home using the GLOBE Observer app.

[View our data on the global map](#)



GLOBE Cloud Satellite Match

GLOBE Cloud Observations Paired with NASA Satellite Data

Useful Resources: [Observation Tips & Tricks](#) | [Cloud Cover](#) | [Cloud Type](#) | [Cloud Opacity](#) | [Cloud Satellite Comparisons](#)

Observation	Your GLOBE Ground View	NOAA-20 View
Universal Date/Time	2026-08-04 12:23:00	2026-08-04 12:17:00
Latitude	70.8	70.41 to 71.21
Longitude	-52.99	-53.23 to -52.43
Total Cloud Cover	Overcast (>90%) 	Overcast (99.86%) 
High Clouds	Cover: Overcast (>90%) 	Cover: Overcast 92.03%  Altitude: 7.42 (km) Phase: Ice/Water Mix 247.66 (K) Opacity: Opaque
Mid Clouds	 Altocumulus  Altostratus Cover: Overcast (>90%)  Opacity: Opaque	Cover: Few (7.84%)  Altitude: 5.93 (km) Phase: Water 258.23 (K) Opacity: Opaque
Low Clouds	 Stratus  Cumulus Cover: Few (<10%)  Opacity: Translucent	

iNaturalist

Throughout this voyage, guests played a vital role in documenting Greenland's incredible biodiversity.

Together, we gathered:

- 854 Observations
- 175 Species Identified
- 14 Observers Participating

Each observation helps scientists build a clearer picture of biodiversity in Arctic and high-Arctic regions.

Click the link below to view the collective data and see the impact of the contributions:

<https://www.inaturalist.org/projects/grand-greenland-mythical-lands-of-the-north-ms-fridtjof-nansen-august-1-15-2026>



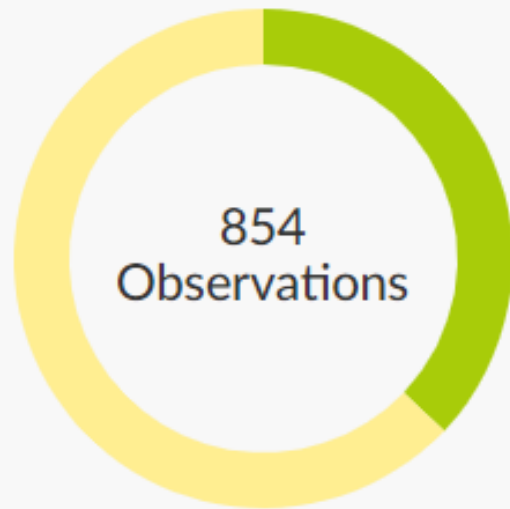
Map of Observations



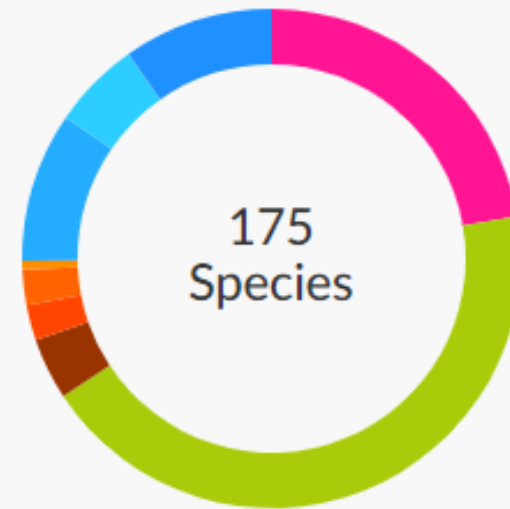
Recent Observations



Stats



- Research Grade
- Needs ID
- Casual



- Unknown
- Protozoans
- Fungi
- Plants
- Chromista
- Mollusks
- Insects
- Arachnids
- Ray-Finned Fish
- Amphibians
- Reptiles
- Birds
- Mammals
- Other Animals



eBird

During the voyage, the ornithologists on board conducted eight wildlife watches, completed 30 checklists, and recorded 24 bird species.

Every entry adds to a growing database that helps scientists track migration patterns, monitor populations, and understand bird behaviour in the North Atlantic.

Click the link to explore the data and see how the observations contribute to a global effort in avian research:

<https://ebird.org/tripreport/554951>

eBird

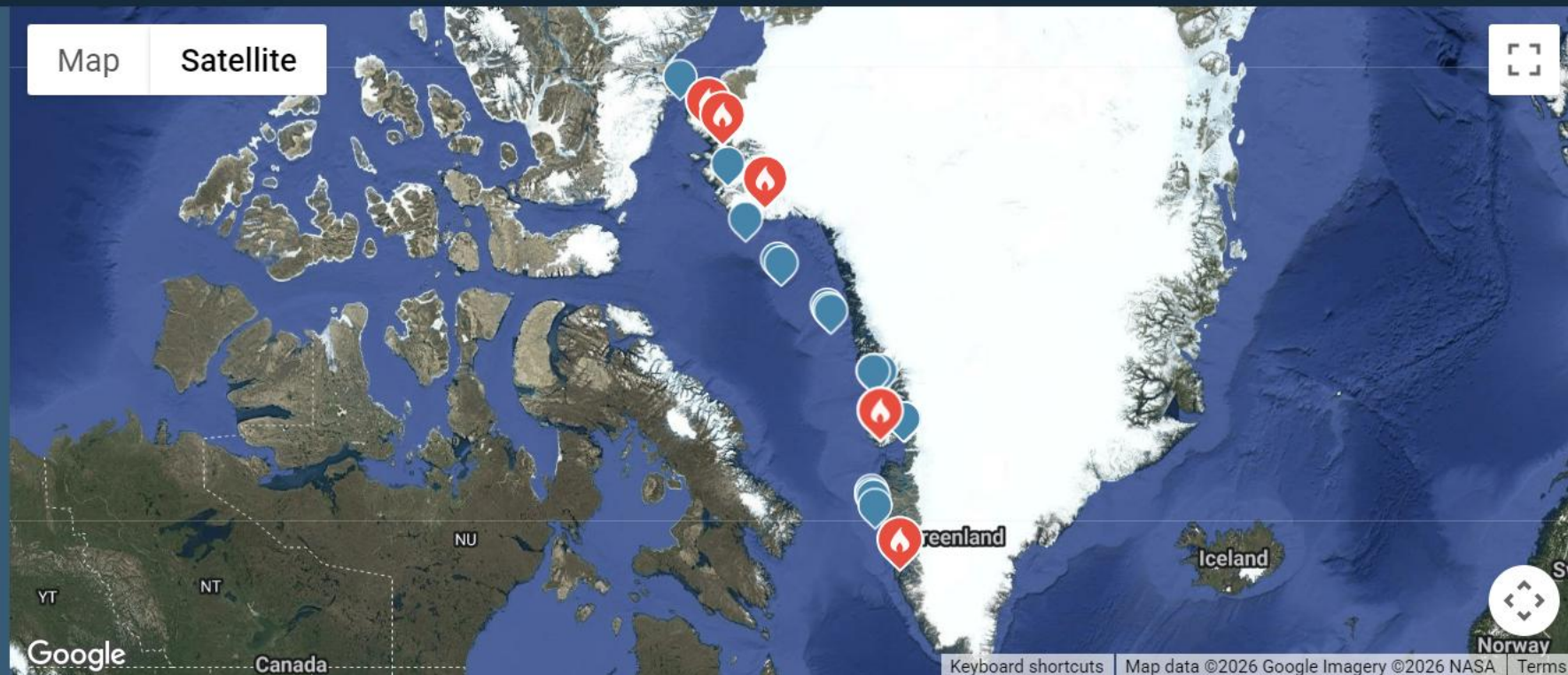
MS Nansen - Grand Greenland, Mythical Lands of the North (1 – 15 August 2026)

1 – 15 Aug 2026 (15 days)

Public

 Greenland

 Science Coordinator, Julia Schroeder,
Eilidh Morrison



Happywhale

Cetaceans — whales, dolphins and porpoises — often draw attention wherever they appear. Through Happywhale, guests contributed photographs that can help scientists identify individual animals and track their movements over time. During this voyage, guests and the Expedition Team submitted observations of humpback whales and orcas. These records can now be compared with existing individuals in the Happywhale database or added as new matches.

Guests can continue following MS Fridtjof Nansen's submissions, check for future matches, and upload their own photographs from this or previous voyages.



Happywhale

Guests photographed a humpback whale north of Ilulissat that was later identified through Happywhale as HW-MN0103774. The individual has a record of 13 sightings, beginning in Iceland in March 2023, including an encounter in Faxaflói Bay near Reykjavík.

During this voyage, guests added a new sighting from the waters of western Greenland in August 2026. The match connected observations made more than three years apart and across the North Atlantic, showing how a single photograph can help build the movement history of an individual whale.





Sex Unknown

Humpback Whale

Sightings 13

First



2023-03-31

Southern Peninsula, Iceland

Last



2026-08-05

Avannaata, Greenland

Followers 0

Follow



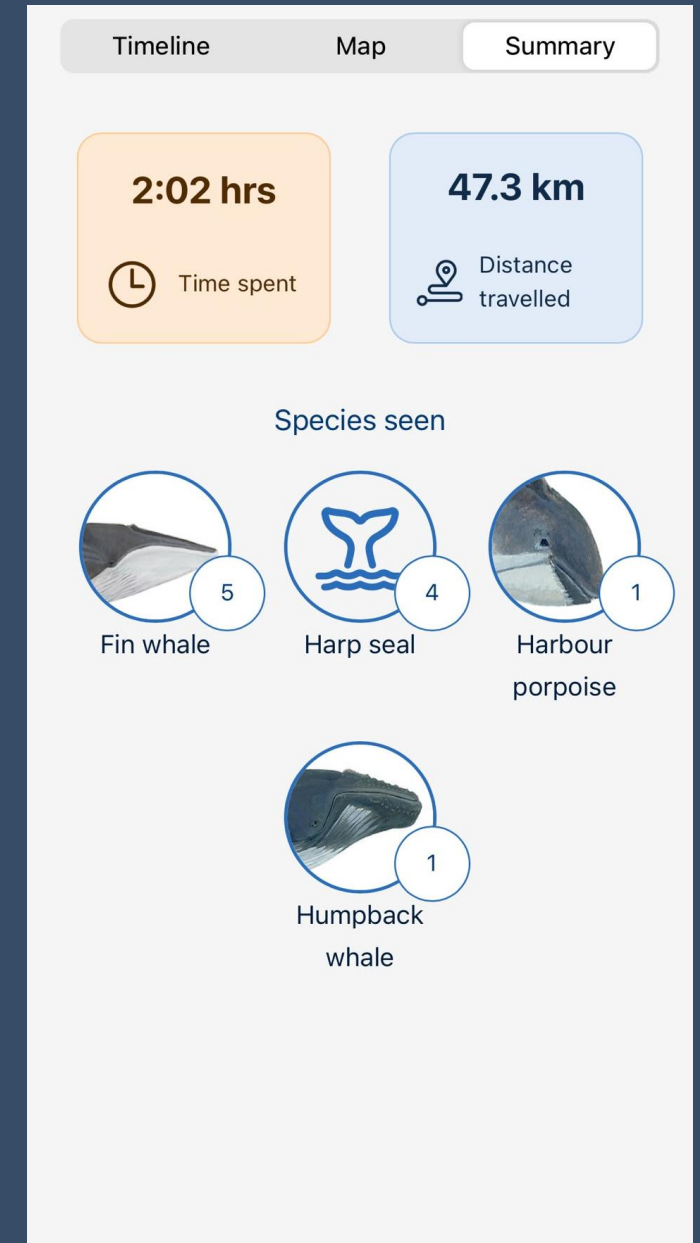
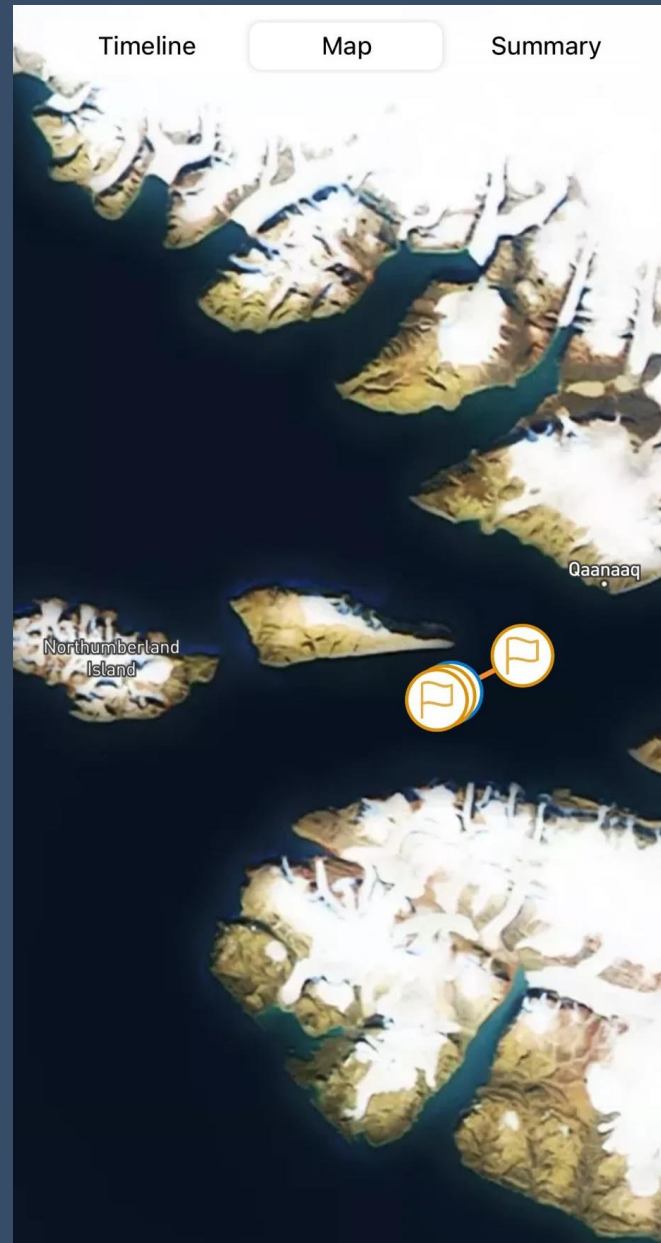
Seen this individual?

Share Your Experience

Show My Encounters Only

ORCA

While on your journey through the Labrador Sea, guests were joined by ORCA Ocean Conservationist Eilidh, who was collecting data on whales, dolphins and porpoises. This data was collected using the ORCA OceanWatchers App and sent back to ORCA to be made available for many organisations interested in cetacean conservation. It will also be made available on the ORCA website interactive map for anyone who wishes to get an overview of what you might find where. On this journey, a total of 24 hours and 55 minutes of data was collected, spanning a distance of 436 km. Six species of marine mammals were recorded during these surveys, with a total of 36 individuals. ORCA



Sightings

Species	Number of individuals seen
Humpback whale (<i>Megaptera novaeangliae</i>)	3
Fin whale (<i>Balaenoptera physalus</i>)	6
Harbour porpoise (<i>Phocoena phocoena</i>)	1
Narwhal (<i>Monodon monoceros</i>)	12 (up to 30)
Unidentified whale	1
Harp seal (<i>Pagophilus groenlandicus</i>)	6
Bearded seal (<i>Erignathus barbatus</i>)	1
Unidentified seal	8

Wildlife List — Birds



Wildlife List — Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
<i>Anser caerulescens</i>	snow goose	Schneegans	oie des neiges	雪雁
<i>Branta canadensis</i>	Canada goose	Kanadagans	bernache du Canada	加拿大黑雁
<i>Anas platyrhynchos</i>	Mallard	Stockente	canard colvert	绿头鸭
<i>Somateria spectabilis</i>	king eider	Prachteiderente	eider à tête grise	王绒鸭
<i>Somateria mollissima</i>	common eider	Eiderente	eider à duvet	欧绒鸭
<i>Charadrius hiaticula</i>	common ringed plover	Sandregenpfeifer	pluvier grand-gravelot	剑鸻
<i>Phalaropus lobatus</i>	red-necked phalarope	Odinshühnchen	phalarope à bec étroit	红颈瓣蹼鹬
<i>Stercorarius pomarinus</i>	pomarine jaeger	Spatelraubmöwe	labbe pomarin	中贼鸥
<i>Fratercula arctica</i>	Atlantic puffin	Papageitaucher	macareux moine	北极海鹦
<i>Cephus grylle</i>	black guillemot	Gryllteiste	guillemot à miroir	白翅斑海鸽
<i>Alle alle</i>	dovekie (little auk)	Krabbentaucher	mergule nain	侏海雀
<i>Uria lomvia</i>	thick-billed murre	Dickschnabellumme	guillemot de Brünnich	厚嘴崖海鸦
<i>Rissa tridactyla</i>	black-legged kittiwake	Dreizehenmöwe	mouette tridactyle	三趾鸥
<i>Larus marinus</i>	great black-backed gull	Mantelmöwe	goéland marin	大黑背鸥
<i>Larus hyperboreus</i>	glaucous gull	Eismöwe	goéland bourgmestre	北极鸥

Wildlife List — Birds

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
<i>Larus fuscus</i>	lesser black-backed gull	Heringsmöwe	Goéland brun	小黑背鸥
<i>Larus glaucoides</i>	Iceland gull	Polarmöwe	Goéland arctique	冰岛鸥
<i>Gavia stellata</i>	red-throated loon	Sterntaucher	Plongeon catmarin	红喉潜鸟
<i>Gavia immer</i>	common loon	Eistaucher	Plongeon huard	普通潜鸟
<i>Fulmarus glacialis</i>	northern fulmar	Eissturmvogel	fulmar boréal	暴雪鹱
<i>Phalacrocorax carbo</i>	great cormorant	Kormoran	grand cormoran	普通鸬鹚
<i>Corvus corax</i>	common raven	Kolkrabe	grand corbeau	渡鸦
<i>Calcarius lapponicus</i>	Lapland longspur	Spornammer	plectrophane lapon	铁爪鹀
<i>Plectrophenax nivalis</i>	snow bunting	Schneeammer	plectrophane des neiges	雪鹀

Wildlife List — Marine Mammals



Wildlife List — Mammals

SCIENTIFIC NAME	ENGLISH	DEUTSCH	FRANÇAIS	中文
<i>Megaptera novaeangliae</i>	humpback whale	Buckelwal	baleine à bosse	大翅鲸
<i>Balaenoptera physalus</i>	fin whale	Finnwal	rorqual commun	长须鲸
<i>Phocoena phocoena</i>	harbour porpoise	Schweinswal	marsouin commun	港湾鼠海豚
<i>Monodon monoceros</i>	narwhal	Narwal	narval	一角鲸
<i>Ursus maritimus</i>	polar bear	Eisbear	ours blanc	北极熊
<i>Pagophilus groenlandicus</i>	harp seal	Sattelrobbe	phoque du groenland	竖琴海豹
<i>Erignathus barbatus</i>	bearded seal	Bartrobbe	phoque barbu	髯海豹
<i>Pusa hispida</i>	ringed seal	Ringelrobbe	phoque annelé	环斑海豹
<i>Leptus arcticus</i>	Arctic hare	Polarhase	lievre arctique	北极兔
<i>Vulpes lagopus</i>	Arctic fox	Polarfuchs	renard arctique	北极狐

The background of the slide features a deep blue underwater scene with two whales swimming upwards. A large, semi-transparent watermark consisting of the Roman numerals 'IX' is overlaid on the left side of the image. The text 'Thank you for your participation!' is centered in the middle of the slide in a white, sans-serif font.

Thank you for your participation!